

*Observations of the Great Southern Comet 1880, I. made at Monte Video. By Lieut. B. Gwynne.**(Communicated by the Secretaries.)*

The accompanying diagrams* are intended to show the appearance and relative position of the tail of a large comet with reference to some fixed stars near which it was situated, observed at Monte Video (Rio de la Plata) on the 1st, 2nd, 3rd, 4th and 8th February, the overcast state of the sky preventing my observing its position on the intermediate evenings (4th to 8th).

On the 1st February, after a long twilight, the comet's tail was observed in a S.S.W. direction, having an altitude of about 20° above the horizon.

Subsequent observations show the comet to have an apparent motion of 2° to the westward in twenty-four hours.

The brilliancy of the comet's tail was, on the 1st, about that of the Milky Way on a clear frosty night, and each succeeding day showed a diminution in brilliancy until the 8th, when it was difficult to trace the direction of the tail, although the night was favourably dark.

No vestige of a nucleus could be detected with a ship's spy-glass (sufficiently powerful to see *Jupiter's* satellites with).

Therefore I am unable, for want of space and time, to give a clearer idea of the comet's position and apparent motion than with a few diagrams.

I am of opinion that the comet was in or near perihelion on the 1st of February and that the tail preceded the nucleus in its motion through space. Doubtless, observations of value have been made at the Cape, Australia and Cordoba (South America), and other Observatories.

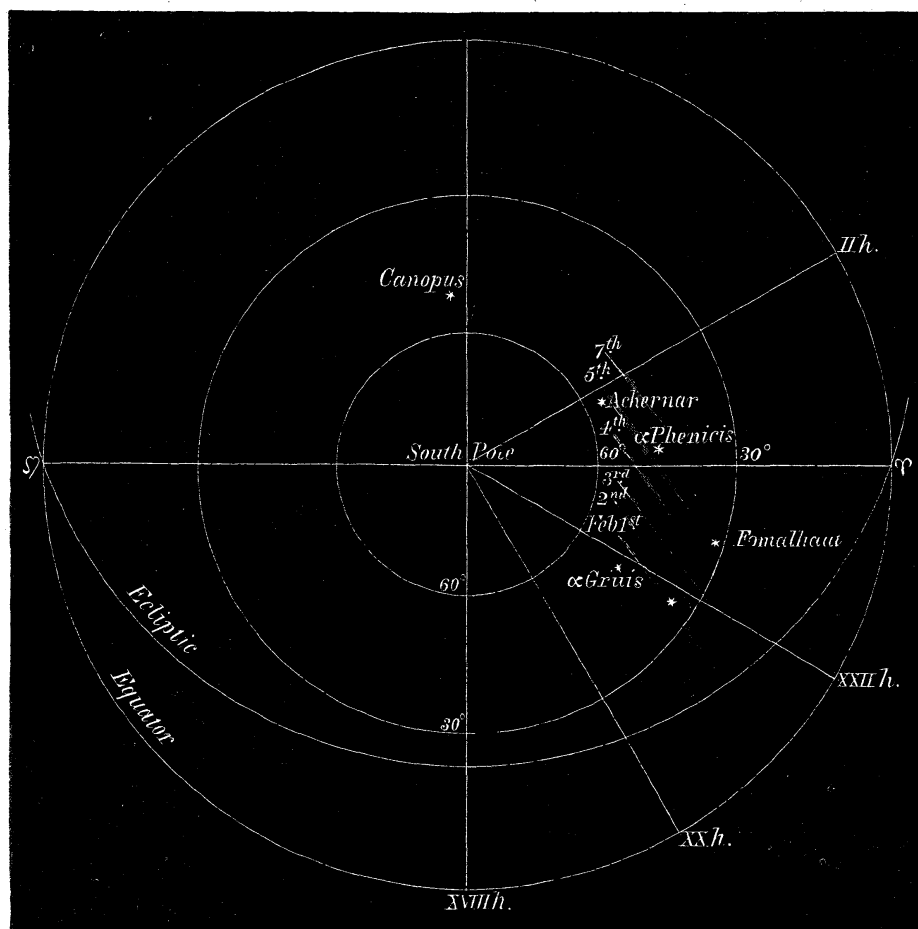
*H.M.S. "Garnet," Monte Video,
1880, February 9.*

*Observations of the Great Southern Comet 1880, I. from Feb. 1 to Feb. 7, made at Monte Video. By the Rev. S. S. O. Morris.**(Communicated by the Astronomer Royal.)*

The tail of a comet was observed from H.M.S. 'Garnet,' at about 8 P.M. on the evening of Sunday the 1st Feb., 1880. The 'Garnet' was at the time lying in the outer roads at Monte Video. The nucleus of the comet was at the time beneath the horizon. The visible part of the tail cut the horizon at about the S.S.W. point nearly at right angles, and the altitude of the extremity of the tail visible to the naked eye was about 30° . The tail lay

* The diagrams were exhibited at the Meeting.—Ed.

across the constellations of *Grus* and *Piscis Australis* in direction parallel to the line of direction of the Milky Way. The R.A. of the nucleus conjectured from the direction of the tail and the position of the Sun was at 8 P.M. on the 1st Feb. about 21h. Two small stars of *Piscis Australis* were visible through the tail. These two small stars lying close together were noted as a mark whereby the motion of the comet could be observed on future nights. There was a slight arch in the tail concave towards the south pole, convex towards Fomalhaut, which lay to the west of



the comet. The tail was again observed on the evening of the 2nd; the nucleus was not visible. The position of the tail at 8 P.M. was altered from the previous evening; it had moved from the two bright small stars in *Pisc. Austr.* and had approached Fomalhaut; at the same time its extremity had a greater altitude than on the night of the 1st Feb. We watched carefully for the first appearance of the comet on the evening of the 3rd, but, although the tail, now of immense dimensions, soon became visible, the nucleus had not yet become visible. The position of the tail on the night of the 3rd was to the right and west of its

position on the night of the 2nd. The successive positions of the tail on the nights of the 1st, 2nd, and 3rd implied a motion in R.A. of the nucleus of about 10^m in 24 hours. The increase in South Declination of the nucleus would be very roughly about 4° . On this night the end of the tail was not far off Achernar (α Eridani). On the 4th the nucleus was not yet visible; the position of the tail on this night established the general path in the heavens of the nucleus—viz. about 10^m increase in R.A., 4° increase in S. Decl. An arc of a great circle passing through Canopus and Achernar would have very nearly coincided with the axis of the tail. The evening of the 5th was overcast, but the clouds broke sufficiently for it to be seen that the motion already conjectured had continued. The evening of the 6th was overcast. The evening of the 7th was cloudy, but in a break of the clouds the comet's tail was seen to the right of Achernar and now extending much beyond Achernar.

Note on the Great Southern Comet 1880, I. as seen at Melbourne, Feb. 2 to Feb. 5. By R. L. J. Ellery, Esq.

A large comet, low on the western horizon, was first seen here on the evening of February 2. Owing to its lowness and the fact of the horizon being very hazy every evening since its appearance no observation of the nucleus has yet been possible: indeed, the nucleus has not been seen at this Observatory at all, although it is stated to have been seen in other parts of the colony.

On Feb. 2 the tail was seen extending above the horizon reaching to β Gruis; it tended towards west, making an angle of 60° with the horizon. It has been observed every night since, and last night the tail reached a little beyond ϵ Phœnicis—the north edge passing through it. It is much less bright than on Feb. 2, but much longer; and on Feb. 4 the tail could occasionally be traced nearly to the horizon without any appearance of condensation, while it extended upwards to the prolongation of the line joining α and ϵ Phœnicis.

Probably other observers in Australia have been more fortunate than we have, but this brief account from here may not be without interest.

The weather has been unusually clear for some weeks past and the horizon was carefully scanned on the evening of Feb. 1, but nothing was seen of the comet till the evening of the 2nd.

*Observatory, Melbourne,
1880, February 6.*